MCL-Loader Version 2

User's Guide

MCL-Loader Version 2
User's Guide

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symbol®

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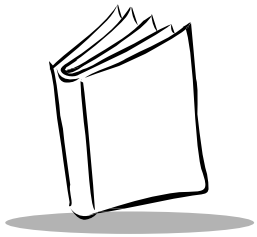
One Symbol Plaza
Holtsville, New York 11742-1300
http://www.symbol.com



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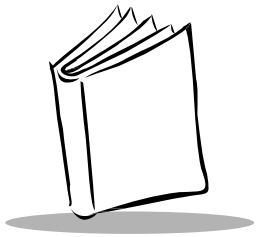

About This Guide

The *MCL-Loader Version 2.0 User's Guide* provides general information about operating the MCL-Loader application, configuring the software, and using the MCL-Code interpreter.

Notational Conventions

The following conventions are used in this document:

- "Operator" and "User" refer to anyone using the MCL-Loader software.
- "PC" refers to the IBM personal computer or compatible system that you are using to develop applications.
- "Terminal" refers to various types of Symbol terminals.
- "You" refers to the administrator or person who is using this guide as a reference aid to install, configure, and/or operate the software.
- Keystrokes in bold type indicate non-alphanumeric keystrokes. For example: Select the <**F1**> key on the terminal to access on-line help.
- **Bold** type is used to identify menu items and input or text fields on a terminal screen.
- *Italics* are used:
  - for the names of parameters in function prototypes and variable names in usage and syntax descriptions
  - to highlight specific items in the general text
  - to identify chapters and sections in this and related documents.
- Square brackets [ ] in a command line enclose optional command line parameters.
- The piping symbol | has the effect of "or" when it is used to separate inline parameters on a command line; i.e., it separates alternative values for parameters.

- Bullets (•) indicate:
  - action items
  - lists of alternatives
  - lists of required steps that are not necessarily sequential.
- Sequential lists (e.g., those that describe step-by-step procedures) appear as numbered lists.

Related Publications

The following is a list of documents that you may find useful if you want to know more about the MCL-Loader software.

- *MCL-Net S24 User's Guide*
  p/n 70-33348-xx
- *MCL-Link User's Guide*
  p/n 70-33346-xx
- *MCL-Designer User's Guide*
  p/n 70-33345-xx

Service Information

If you have a problem with your equipment, contact the *Symbol Support Centers*. Before calling, have the model number, serial number, and several of your bar code symbols at hand.

Call the Support Center from a phone near the scanning equipment so that the service person can try to talk you through your problem. If the equipment is found to be working properly and the problem is symbol readability, the Support Center will request samples of your bar codes for analysis at our plant.

If your problem cannot be solved over the phone, you may need to return your equipment for servicing. If that is necessary, you will be given specific directions.

Note: *Symbol Technologies is not responsible for any damages incurred during shipment if the approved shipping container is not used. Shipping the units improperly can possibly void the warranty. If the original shipping container was not kept, contact Symbol to have another sent to you.*

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2540 Matheson Boulevard East
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905-629-7226

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Symbol Technologies
Symbol Place
Winnersh Triangle, Berkshire RG41 5TP
United Kingdom
0800 328 2424 (Inside UK)
+44 118 945 7529 (Outside UK)

Asia/Pacific

Symbol Technologies Asia, Inc.
230 Victoria Street #04-05
Bugis Junction Office Tower
Singapore 188024
337-6588 (Inside Singapore)
+65-337-6588 (Outside Singapore)

Australia

Symbol Technologies Pty. Ltd.
432 St. Kilda Road
Melbourne, Victoria 3004
1-800-672-906 (Inside Australia)
+61-3-9866-6044 (Outside Australia)

Austria

Symbol Technologies Austria GmbH
Prinz-Eugen Strasse 70
Suite 3
2.Haus, 5.Stock
1040 Vienna, Austria
1-505-5794 (Inside Austria)
+43-1-505-5794 (Outside Austria)

Denmark

Symbol Technologies AS
Gydevang 2,
DK-3450 Allerod, Denmark
7020-1718 (Inside Denmark)
+45-7020-1718 (Outside Denmark)

Europe/Mid-East Distributor Operations

Contact your local distributor or call
+44 118 945 7360

Finland

Oy Symbol Technologies
Kaupintie 8 A 6
FIN-00440 Helsinki, Finland
9 5407 580 (Inside Finland)
+358 9 5407 580 (Outside Finland)

France

Symbol Technologies France
Centre d'Affaire d'Antony
3 Rue de la Renaissance
92184 Antony Cedex, France
01-40-96-52-21 (Inside France)
+33-1-40-96-52-50 (Outside France)

Germany

Symbol Technologies GmbH
Waldstrasse 68
D-63128 Dietzenbach, Germany
6074-49020 (Inside Germany)
+49-6074-49020 (Outside Germany)

Italy

Symbol Technologies Italia S.R.L.
Via Cristoforo Columbo, 49
20090 Trezzano S/N Navigilo
Milano, Italy
2-484441 (Inside Italy)
+39-02-484441 (Outside Italy)

Latin America Sales Support

7900 Glades Road
Suite 340
Boca Raton, Florida 33434 USA
1-800-347-0178 (Inside United States)
+1-561-483-1275 (Outside United States)

Mexico

Symbol Technologies Mexico Ltd.
Torre Picasso
Boulevard Manuel Avila Camacho No 88
Lomas de Chapultepec CP 11000
Mexico City, DF, Mexico
5-520-1835 (Inside Mexico)
+52-5-520-1835 (Outside Mexico)

Netherlands

Symbol Technologies
Kerkplein 2, 7051 CX
Postbus 24 7050 AA
Varsseveld, Netherlands
315-271700 (Inside Netherlands)
+31-315-271700 (Outside Netherlands)

Norway

Symbol Technologies
Trollasveien 36
Postboks 72
1414 Trollasen, Norway
66810600 (Inside Norway)
+47-66810600 (Outside Norway)

South Africa

Symbol Technologies Africa Inc.
Block B2
Rutherford Estate
1 Scott Street
Waverly 2090 Johannesburg
Republic of South Africa
11-4405668 (Inside South Africa)
+27-11-4405668 (Outside South Africa)

Spain

Symbol Technologies S.A.
Edificioi la Piovera Azul
C. Peonias, No. 2 - Sexta Planta
28042 Madrid, Spain
9-1-320-39-09 (Inside Spain)
+34-9-1-320-39-09 (Outside Spain)

Sweden

Symbol Technologies AB
Albygatan 109D
Solna
Sweden
84452900 (Inside Sweden)
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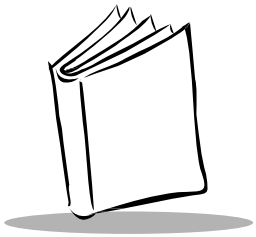


Chapter 1
MCL-Loader

Overview

MCL-Loader is 16-bit application that runs on Windows 95 and NT operating systems. MCL-Loader is designed to load and activate the MCL-Code Interpreter into a Symbol portable data terminal (PDT). This application also removes the MCL-Code Interpreter from a terminal.

Loading and activation are two separate operations that do not have to be done at the same time. A hardware key (dongle), connected to the host computer's parallel port, controls the number of times that MCL-Code Interpreter is activated on a terminal. The number of activation "units" (license units) is subtracted from the hardware key when the interpreter is activated on a terminal and added when removed from a terminal. The interpreter can be loaded onto any number of terminals. The activation costs one or two unit(s) depending on the interpreter you activate.

To activate an MCL-Code Interpreter, the application needs this hardware key with a minimum of 1 or 2 unit(s) remaining.

The hardware key is not required to load MCL-Code Interpreter into the terminal. Hardware keys may be chained on one parallel port, but MCL-Loader only takes units from the first key plugged into the port.

Note: *The runtime activation code is stored in the NVM Flash Memory in the terminal. It is then permanently saved. Erasing the NVM memory on the terminal without performing a "Remove MCL-Code" operation means the LOSS of the activation code and unit(s).*

Installing MCL-Loader

To install the MCL-Loader application:

1. Insert the MCL-Collection CD-ROM disk into the CD-ROM drive.
2. Click the Start button on the task bar.
3. Select Run.
4. Type **D:\setup.exe**. and click OK (replace D: with the CD-ROM drive letter).
5. Click Next when the introductory screen appears.
6. Click Yes to accept the license agreement.
7. When prompted, type your name and company in the appropriate fields. Click Next.
8. Click Next to accept the default directory or click Browse to select a different directory. Click OK, then Next.
9. Click Next to install all the MCL programs, or select MCL Loader and de-select all the other options.
10. Click Next to accept the MCL2 program folder.
11. Setup installs the selected programs onto the hard drive. A screen that monitors the progress appears. When installation is complete, click Finish.

Starting MCL-Loader

To run the MCL-Loader application:

1. If a printer or other device is plugged into the parallel port, disconnect it.
2. Connect the hardware key in the host computer's parallel port.
3. Connect the printer or other device that was just disconnected into the hardware key.
4. Double-click on the MCL-Loader V2 icon on the desktop. The MCL-Loader window appears.

Using MCL-Loader

To use a terminal using MCL:

1. Load the MCL-Code interpreter in the terminal.
2. Activate the MCL-Code interpreter.

The activation can be done manually (terminal not connected) or automatically (terminal connected to the host computer).

To be able to activate the MCL-Code interpreter, you need to have the license unit(s) that are stored in a hardware key.

Information From Hardware Key

The *General* tab shows the key license number and the total number of units left on the hardware key.

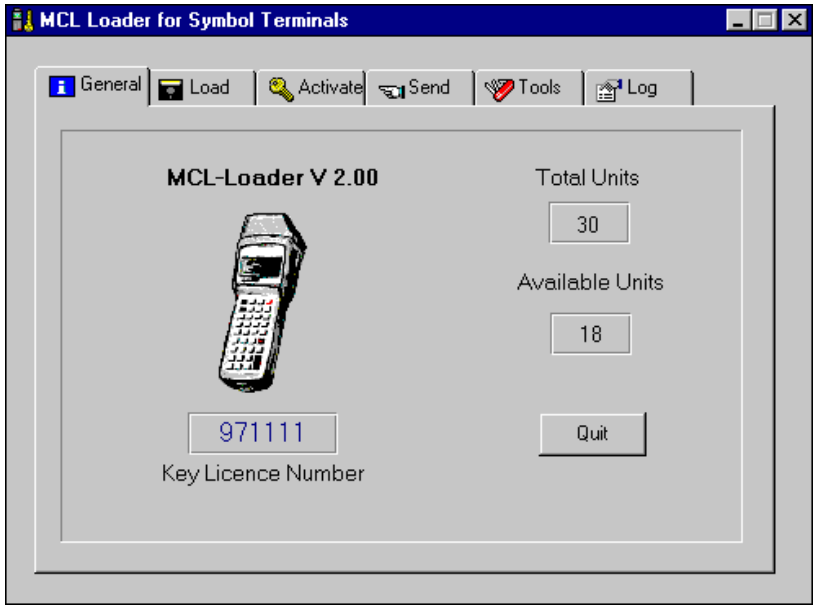


Figure 1-1. MCL-Loader - General Tab (license Information)

Loading One MCL-Code Interpreter Into the Terminal

The *Load* tab allows you to load the MCL-Code Interpreter into a terminal:

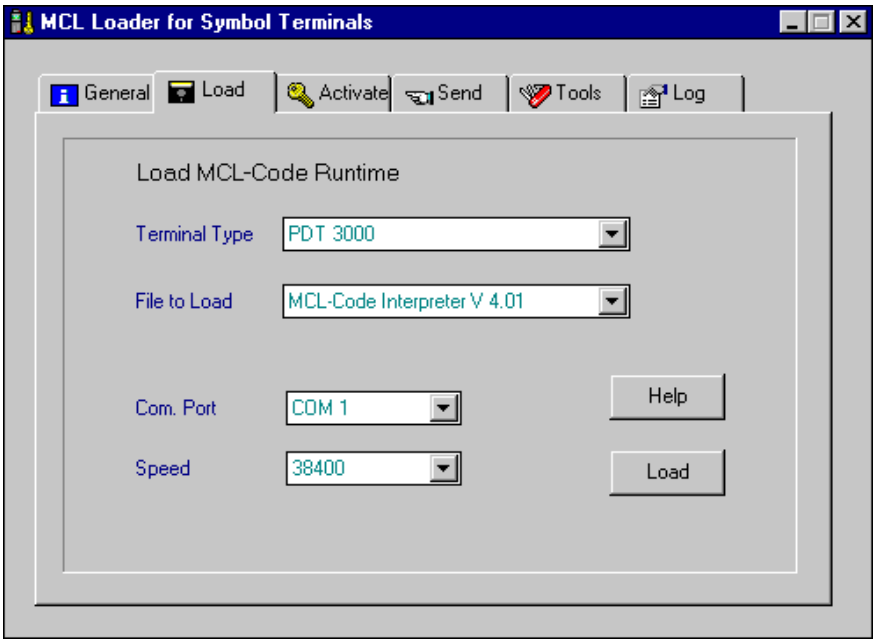


Figure 1-2. MCL Loader Screen - Load Tab

Note: *This operation can be completed without the hardware key connected to the parallel port of the host computer.*

---

1. Place the terminal in the cradle or connect it to a PIM.
2. On the terminal, select *Program Loader* function (refer to *Terminal Command Mode on page 1-12* for more information).
3. Select the terminal type and file to download. Click on the list box to expand the list of choices.
4. Set the host communication port (COM1 to COM4), and the communication speed (default = 38400 bauds).
5. Click the Load button to send the MCL-Code file(s) to the terminal.

If the transfer completes successfully (the status displays on the terminal's screen), cold boot the terminal. (Refer to *Terminal Hot Keys* on page 1-11 for more information.)

Note: *More than one terminal can be loaded at the same time using a multi-slot cradle, but the speed cannot exceed 19200 bps.*

For RF Spectrum24 terminals (PDT3140, PDT6140, PDT6840, LRT3840 and WSS1040) two files must be loaded:

- MCL-Code RF driver
- MCL-Code Interpreter.

Activate the Run-Time MCL-Code Interpreter

The Run-Time MCL-Code interpreter can be activated manually or automatically.

Automatic Activation

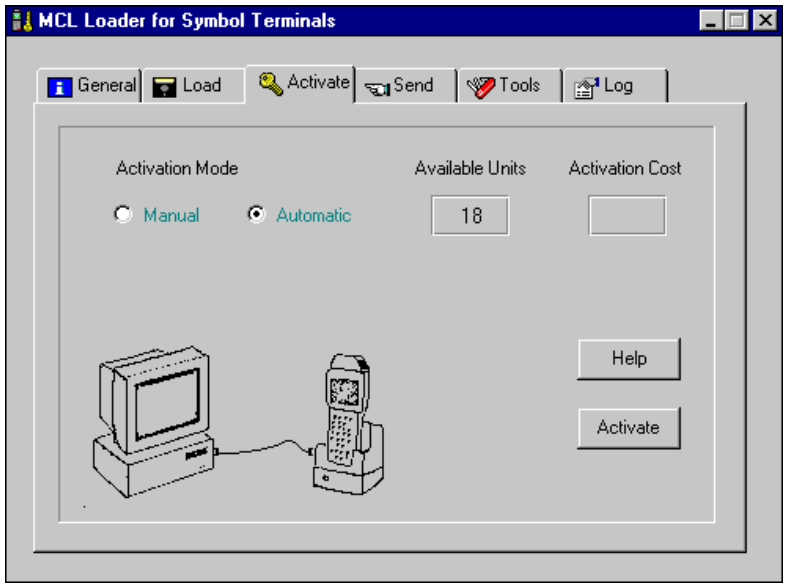


Figure 1-3. MCL Loader Screen - Activate Tab - Automatic Mode

1. Make sure that the terminal is connected to the host computer.
2. Click on the *Activate* tab.
3. Select Automatic Activation Mode. The Automatic Mode performs the activation of the run-time with a minimum of manipulation.
4. Communication is established between the host computer and the terminal.
5. On the terminal enter the serial number when prompted.
6. Click on the Activate button.

Note: *When the Activate button is pressed, the program is waiting to start a dialog with the terminal. Once the terminal terminates the dialog, the Loader program re-enters the same process and waits for the next dialog. It is possible to activate several terminals in sequence without any operation on the PC side.*

The serial number is printed on the label of the terminal. Enter only the 6 last numeric digits (i.e., : SN:E585546 enter : 585546).

Manual Activation

Select the manual mode to perform an off-line activation or a remote activation (i.e., by phone).

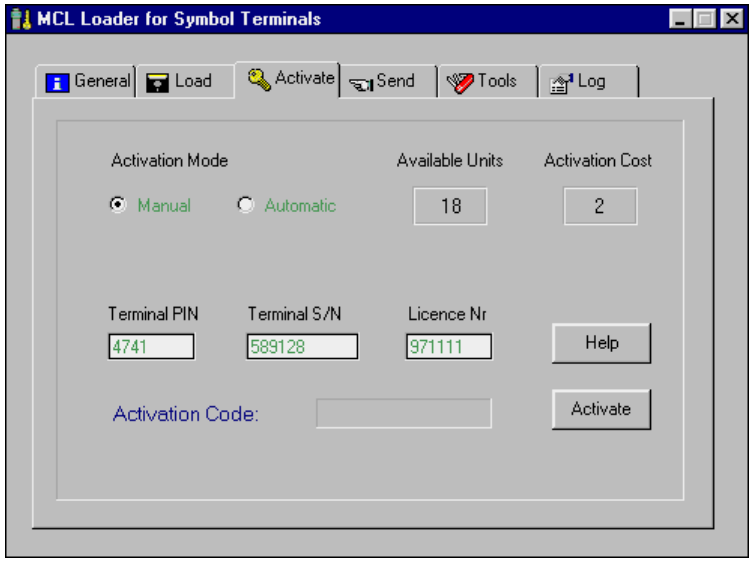


Figure 1-4. MCL Loader Screen - Activate Tab - Manual Mode

1. Select Manual Activation Mode.
2. Enter the terminal's 4-digit PIN number in the *Terminal PIN* field (displayed on the terminal screen).
3. Enter the terminal serial number in the terminal S/N field (PC side) and on the terminal. This serial number is printed on the label on the back of the terminal. Enter only the 6 last numeric digits (i.e., : SN:E585546 enter : 585546).
4. On the terminal, enter the license number displayed in the *license Nr.* field and press the <ENTER> key on the terminal.
5. Click the Activate button.
6. The MCL-Loader displays an 8-digit activation code in the *Activation Code* field.
7. Enter the activation code on the terminal and press the <ENTER> key.

According to the run-time version (batch or RF), the activation "cost" (the number of units used) may differ. The number of units available is updated.

Caution

It's very important to double check all numbers and codes before starting activation process. In case of type mismatch, the unit(s) removed by program cannot be recovered !!!

Send MCL Project to the Terminal

Once the MCL project is completed on the computer, it must be sent to the terminal. The *Send* tab loads that project into a terminal:

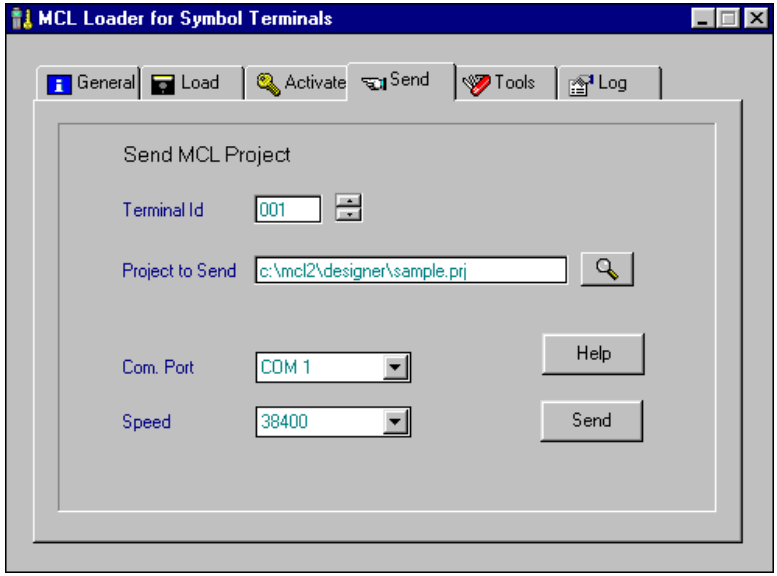


Figure 1-5. MCL Loader Screen - Send Tab

1. Place the terminal in the cradle or connect it to a PIM.
2. On the terminal, select MCL-Link Program function (refer to *The System Menu* on page 2-4 for more information).

3. Click on the magnification button to select the directory where the MCL-Code project file(s) to download reside.
4. Set the host communication port (COM1 to COM4), and the communication speed (default = 38400 bauds).
5. Click the Send button to send the MCL-Code project file(s) to the terminal.

Removing the Run-Time MCL-Code Interpreter From Terminal

This procedure disables the MCL-Code run-time in the terminal and adds the corresponding license unit(s) to the hardware key. The terminal must be connected to the host computer (on-line).

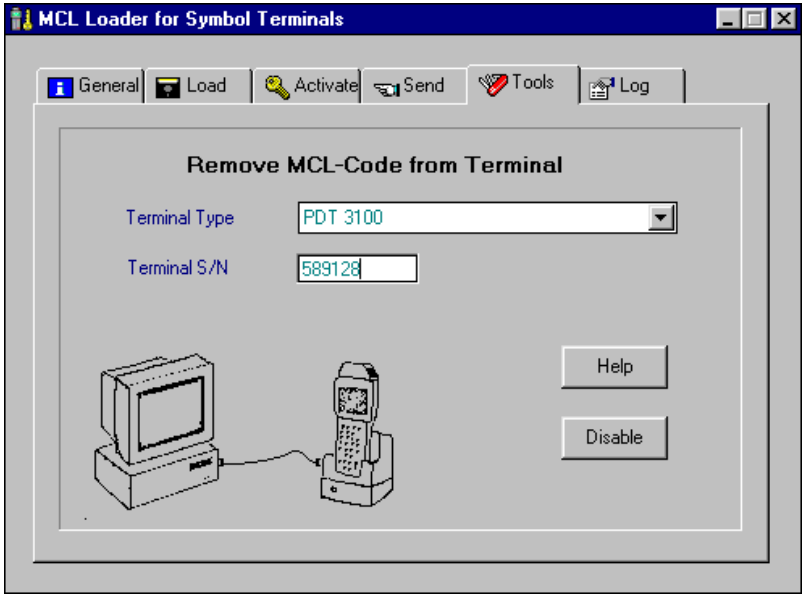


Figure 1-6. MCL Loader Screen - Tools Tab

1. On the terminal, select Remove MCL-Code interpreter mode in the system menu and follow the instructions.
2. On MCL-Loader *Tools* tab, select the type of terminal and enter its serial number in the *Terminal S/N* field.
3. Click the Disable button.

When verification is completed between the terminal and host computer, the number of units in the hardware key is increased.

Note: *This operation can be done using any MCL dongle key from any MCL product (MCL-Link, MCL-NetS24…).*

Activation Database

To view the MCL-Loader log file, click on the *Log* tab. All results of performed operations are displayed in this window.

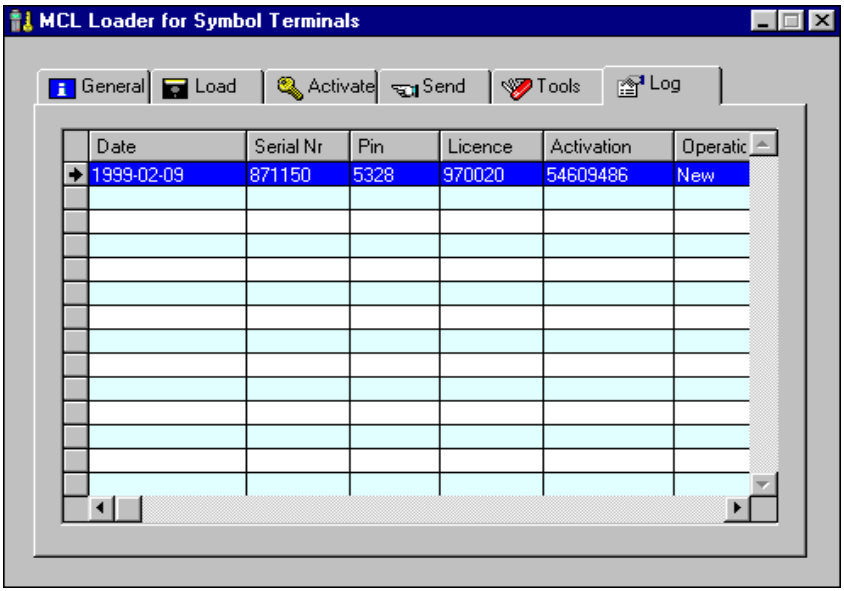


Figure 1-7. MCL Loader Screen - Log Tab

Terminal Hot Keys

Table 1-1 lists the different keys which must be pressed with the <PWR> key to reset the terminal.

Table 1-1. Terminal Hot Keys

	WSS1000 WSS1040 (35 or 46 keys)	**PDT3000 PDT3100 PDT6100 (21 keys)**	**PDT3000 PDT3100 LDT3805 PDT3140 LRT3840 PDT6100 PDT6140 (35 keys)**	**PDT3000 PDT3100 PDT3140 LDT3805 LRT3840 PDT6800 PDT6840 (46 keys)**	**PDT3300 (56 keys)**
Command Mode	<Enter><Func>	<a><I/O>	<Shf><BkSp>	<F><I>	<a><d>
Cold Boot	<←><Enter>	<↑><4><Enter>	<Func><Space><↑>	<A><B><D>	<F1><F4><ENTER>
Warm Boot	<P1><Enter>		<+></>	<4><5>	<Shift><L>

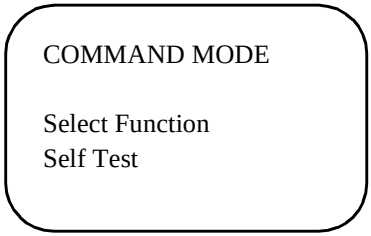
Command Mode erases the MCL-Code interpreter, programs, and data on the terminal. It starts the program loader utilities.

Cold Boot erases all the programs and data on the terminal. It restores all the terminal's parameters to their default value (or stored in NVM).

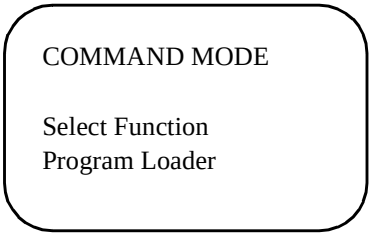
Warm Boot restarts the terminal in a safe mode. It does not erase the programs or data, but restarts the MCL-Code Interpreter.

Terminal Command Mode

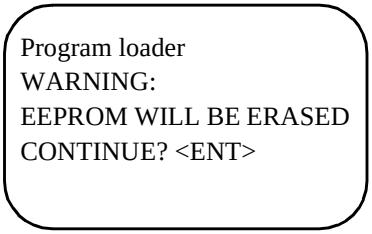
1. When the terminal enters the Command Mode, the following screen appears:



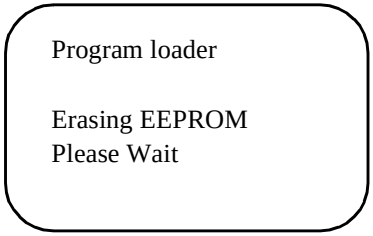
2. Using the arrow keys on the terminal, select Program Loader and press the <ENTER> key.



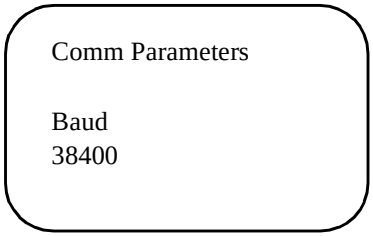
3. The terminal displays the following message. Press the <ENTER> key to confirm.



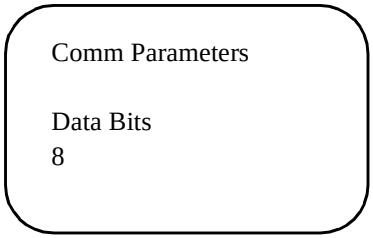
4. The following message displays for a few seconds.



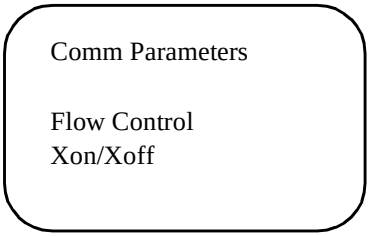
5. Select the Baud rate = 38400 using up and down arrows and press the <ENTER> key.



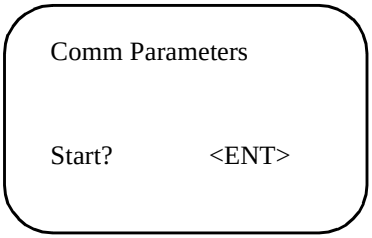
6. Select 8 Data Bits and press the <ENTER> key.



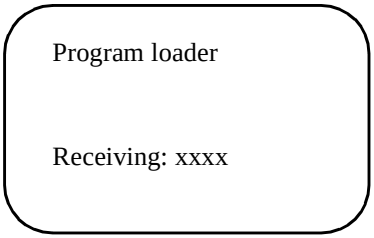
7. Select Xon/Xoff flow control and press the <ENTER> key.



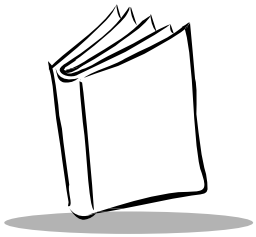
8. Press <ENTER> when the following screen appears.



9. Click the Load button on the MCL-Loader program on the host computer.



10. When run-time is successfully downloaded to the terminal, the message status 0000 displays on the terminal.



Chapter 2
MCL-Code

Introduction

The MCL-Code Interpreter and MCL-Link Communication are loaded into the terminal's Non-Volatile Memory (NVM) or flash disk.

This chapter describes how to access and use the different functions of the software loaded in the following Symbol Technologies terminals:

- PDT 3000
- PDT 3100
- PDT 3140
- PDT 3300
- LDT 3805
- LDT 3840
- PDT 6100
- PDT 6140
- PDT 6800
- PDT 6840
- WSS 1000
- WSS 1040.

Note: *The most common keyboard layouts and screen formats are supported.*
All screen dumps shown in this manual refer to a 4-line 20-character display. On an 8-line terminal, the screen dumps are exactly the same but the last four lines are empty.

Resetting The Terminal

There are two different ways to reset the terminal:

- The Cold Boot erases all the programs and data on the terminal. It restores all the terminal's parameters to their default value (or parameters stored in NVM).
- The Warm Boot restarts the terminal in a safe mode; It does not erase the programs or data and restarts the MCL-Code Interpreter.

Table 2-1 summarizes the keys which must be pressed with the <PWR> key to reset the terminal.

Table 2-1. Boot Keys

	WSS1000 WSS1040 (35 or 46 keys)	**PDT3000 PDT3100 PDT6100 (21 keys)**	**PDT3000 PDT3100 LDT3805 PDT3140 LRT3840 PDT6100 PDT6140 (35 keys)**	**PDT3000 PDT3100 PDT3140 LDT3805 LRT3840 PDT6800 PDT6840 (46 keys)**	**PDT3300 (56 keys)**
Cold Boot	<←><Enter>	<↑><4><Enter>	<Func><Space><↑>	<A><B><D>	<F1><F4><Enter>
Warm Boot	<P1><Enter>		<+></>	<4><5>	<Shift><L>

To reset the terminal:

1. Turn the terminal off.
2. Press the different keys corresponding to the type of terminal you are using and the type of boot you want.
3. Press the <PWR> key for all but the 21-key terminal, then press the I/O key.
4. Release the <PWR> key for all but the 21-key terminal, then release the I/O key.
5. Release all other keys, the terminal restarts in desired mode.

Using The Terminal

The Boot Screen

At the terminal's start-up (cold or warm boot), the terminal screen displays the boot screen (Figure 2-1) of the MCL-Code Interpreter.

Note: *When using the terminal, you can always return to this boot screen by pressing the <CLEAR> key.*

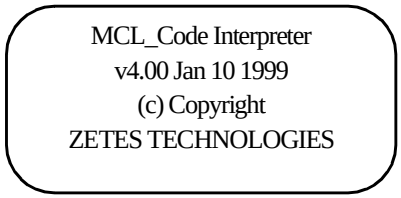


Figure 2-1. Boot Screen

The MCL Interpreter version and its release date displays on the terminal screen for five seconds. If an active key is not pressed, the main program (0.MCL) starts (if it exists), or the System menu displays.

Active keys are:

<CLEAR>	Displays System Menu screen.
<ENTER>	Bypasses the five second boot screen delay.

The System Menu

Press <CLEAR> during the boot screen display to display the *System Menu* (Figure 2-2).

Note: *Waiting five seconds or pressing <ENTER> displays the same screen if the Main (default) MCL program doesn't exist.*

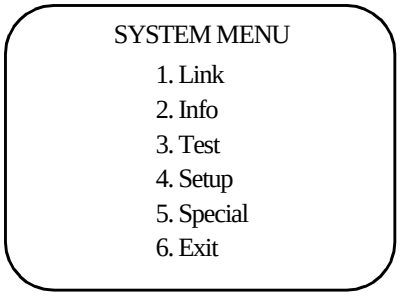


Figure 2-2. System Menu

The active keys for the *System Menu* are:

<CLEAR>	Returns display to the boot screen.
<1>	Starts MCL-Link communication program in wait mode.
<2>	Displays the Information screen.
<3>	Displays the Test Menu.
<4>	Displays the Set-Up Menu.
<5>	Allows the user to select special functions.
<6>	Exits the System Menu.

Using The MCL-Link

Pressing <1> in *System Menu* starts *MCL-Link Communication program*.

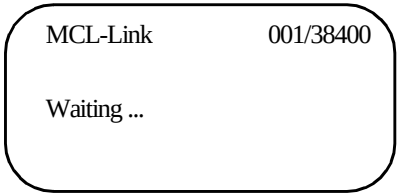


Figure 2-3. MCL-Link Screen

The screen displays the incoming (Rx) and outgoing (Tx) status of the communication between the terminal and the host. The first line displays the following communication parameters:

- name of communication module : MCL-Link
- terminal's address : 001
- communication speed : 38400.

Press <CLEAR> to return to the System Menu.

Testing The Terminal

Pressing <3> in the System Menu displays the Test Menu.

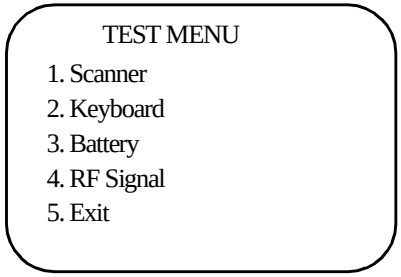


Figure 2-4. Terminal Test

Active keys are:

<CLEAR>	Returns to boot screen.
<1>	Tests scanner.
<2>	Tests keyboard.
<3>	Tests battery level.
<4>	RF Signal.
<5>	Exits the Test Menu.

Pressing <1> lets you scan bar codes and display the result of scanning on screen. Press <CLEAR> to leave this terminal test.

Pressing <2> lets you test your keyboard. This returns the MCL-Code keyboard code. Press <CLEAR> to leave this terminal test.

Pressing <3> shows you the level of the internal battery. The three possible results are:

GOOD	The battery is charged.
BAD	The battery needs to be recharged. It continues to work for several minutes.
DEAD	The terminal stops working in a very short time. Recharge the battery as soon as possible.

Press <CLEAR> to leave this terminal test.

Press <4> to display the level of RF signal (Only for RF terminals).
Press <CLEAR> to leave this terminal test.

Press <5> to exit the Test Menu and display the System Menu.

Setting Up The Terminal

Pressing <4> in the *System Menu* displays the *Setup Menu*.

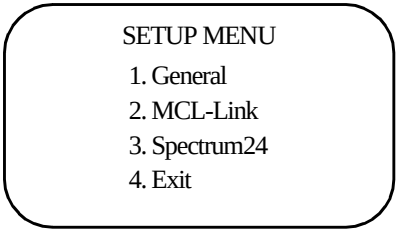


Figure 2-5. Set-up Menu

The active keys for the *Setup Menu* are:

<CLEAR>	Returns to Main Menu
<1>	Terminal's general settings (Address, Time and Date)
<2>	MCL-Link Communication parameters
<3>	MCL-S24 RF Communication parameters
<4>	Exits the Setup Menu.

Note: *Option 3 is displayed only on radio terminals (PDT 3140, PDT 6140, PDT 6840, LDT3840 and WSS 1040).*

General Set-Up

Pressing <1> in the *Setup Menu* displays the *General Setup Menu*.

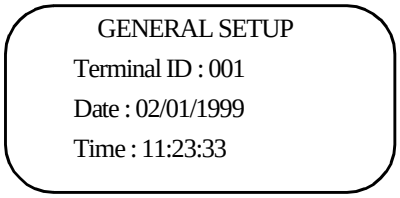


Figure 2-6. General Set-Up

Use arrow keys or <ENTER> to travel into the different entry fields of this screen. Press <ENTER> when you have entered a new field value or <CLEAR> to return to the set-up menu.

Valid entries for station ID address are 001 to 254.

MCL-Link Setup

Pressing <2> in the *Setup Menu* displays the *MCL-Link Setup Menu*.

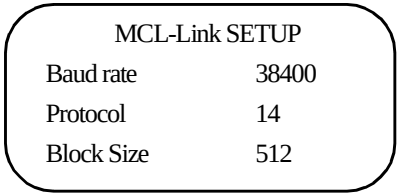


Figure 2-7. MCL-Net Set-Up

Use the Arrow keys or <ENTER> to navigate into the different entry fields of this screen.

Press <ENTER> when you have entered a new field value or <CLEAR> to return to the Setup Menu.

Baud Rate: Defines MCL-Link communication speed.
Valid entries are: 1200 Bauds to 38400 Bauds.
Default value is 38400.

Protocol: Defines how MCL-Link formats addresses and handles file transfer on network. This applies only to the addresses formatted on the network.

The first digit defines the address format. A '0' indicates that the decimal addressing is chosen (001 to 099), a '1' indicates that a hexadecimal addressing is selected (001 to 254).

The second digit defines the size of frame counter in a file transfer (0, 3 or 4 digits). Default value is 14.

Block Size: Maximum block size for transmitting frames on the network.
Note that this value is the maximum frame size and not a maximum size for data. The maximum value for this field is 512 characters. Allowed values are 64, 128, 256 or 512. Default value is 512.

MCL-S24 RF Setup

Pressing <3> in the *Setup Menu* displays the *Configurator Menu*.

CONFIGURATOR 1.16
View config params
Net Id
Subnet Mask
Default router
Terminal IP Address
Diversity
↑↓,Clear, Enter

Figure 2-8. MCL-S24 Set-Up

- Use arrow keys to travel into the different items of this menu.
- Press <ENTER> when you have chosen an item to be modified.
- Press <CLEAR> or select Exit if you want to exit and reboot the terminal.

- To edit a parameter, use <BKSP> , < . > , numeric keys and press <ENTER> to confirm.

Special Functions

Pressing <5> in the *System Menu* displays the *Special Functions Menu*.

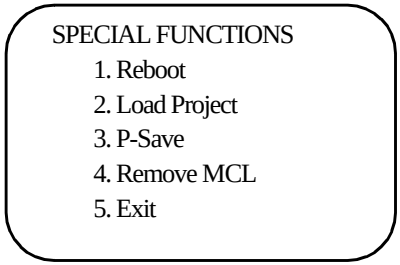


Figure 2-9. Special Functions Menu

The active keys for the *Special Functions Menu* are:

<CLEAR>	Returns display to the system screen.
<1>	Reboot the terminal.
<2>	Load an entire MCL project to the terminal.
<3>	Permanent save of Programs and/or Setup parameters.
<4>	Remove MCL-Code Run-time interpreter.
<5>	Exits the Special Functions Menu.

Rebooting the Terminal

This function reboots the terminal without losing MCL programs and data.

Downloading a MCL Project into the Terminal

This function downloads an entire MCL-Code project into the terminal. The user must select the media that is used to transfer the project.

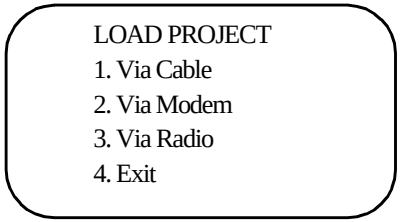


Figure 2-10. Load Project Menu

To abort the operation, press <CLEAR> or press <4>.

Press <1> in the *Load Project Menu* to request the MCL-Link program to download an entire MCL Project to the terminal via a cradle. The Host Id (MCL-Link address) and the communication speed is requested. Confirm with the <ENTER> key on the terminal to begin the download or press <CLEAR> to abort.

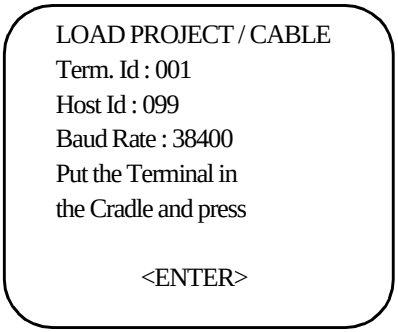


Figure 2-11. Load Project through Cable

Press <2> in the *Load Project Menu* to request the MCL-Link program to download an entire MCL Project to the terminal via a modem. The Host Id (MCL-Link address), the communication speed, the modem type and the dialing number are requested. Confirm with the <ENTER> key on the terminal to begin the download or press <CLEAR> to abort.

Three different types of modems are possible:

- External: the modem is connected between the cradle and the phone line.
- Internal: the modem is included in the cradle.
- Integrated: the modem is included in the terminal.

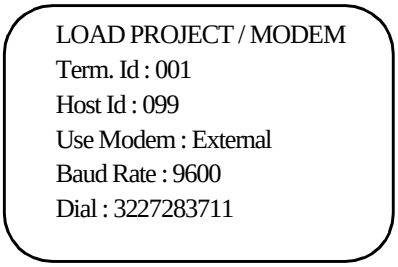


Figure 2-12. Load Project through Modem

Press <3> in the *Load Project Menu* to request the MCL-NetS24 program to download an entire MCL Project to the terminal via RF. The Host Id (MCL-NetS24 address), and the Host IP address is requested. Confirm with the <ENTER> key on the terminal to begin the download or press <CLEAR> to abort.

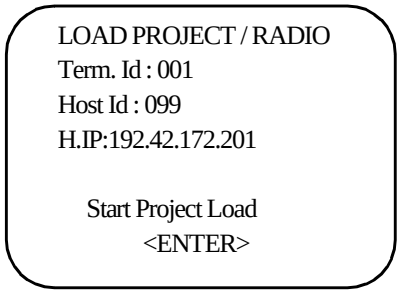


Figure 2-13. Load Project through Radio

Saving Your Programs Permanently

This function saves the set-up parameters or programs into the terminal's NVM for the PDT3100, PDT3300, and LDT3805 terminals or into the flash disk for the PDT3140 and LRT3840 terminals.

Caution

This operation is irreversible for the PDT3100, PDT3805 and PDT3300 terminals. If modifications must be made to the data saved in NVM, the MCL-Code Interpreter must be reloaded.

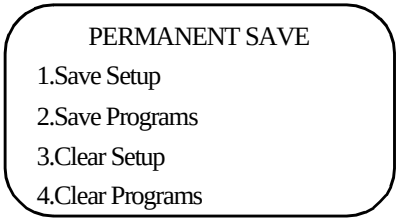


Figure 2-14. Permanent Save Menu

Active keys are:

<CLEAR>	Returns to System Menu.
<1>	Saves set-up parameters into NVM or Flash.
<2>	Saves programs into NVM or Flash.
<3>	Clears set-up parameters from Flash.
<4>	Clears programs from Flash.

Note: *Options 3 and 4 are displayed only on radio terminals (PDT3140 and LDT3840).*
For terminals PDT3100, PDT3300 and LDT3805, option <2> saves all the programs in NVM. The maximum size of all the programs cannot exceed 15 Kbytes.
For terminals PDT3140 or LRT3140, all programs are saved into the flash disk. The maximum size for all programs cannot exceed 300 Kbytes.

Put the terminal in the cradle or connect it to a PIM and press <ENTER>.

After selecting one of those two options, the system prompts you to wait until the saving is complete. When saving is complete, the terminal beeps three times and returns to the permanent save menu.

The set-up parameters or programs are permanently written in your NVM or Flash.

Note: *A second saving operation fails for a terminal that saves the set-up or programs into NVM (PDT3100, PDT3300 or LDT3805) and an error message appears on the screen.*
If program saving is chosen and there is no MCL-Code program(s) on terminal, an error message appears on the screen.

To upgrade a program stored in Flash or NVM (permanently saved):

1. For a batch terminal, load the new program into RAM. The MCL-Code Interpreter first looks for the program (0.MCL) in RAM and if it's not found, then in NVM. After a Cold Boot, however, the program stored in RAM is erased. It is downloaded again unless the MCL-Code interpreter is removed first from the terminal (to save

the license unit), then the whole NVM is erased, and the MCL-Code interpreter and programs must be reloaded.

2. For RF terminals, reload the new programs and perform a Permanent Save on the terminal.

Removing The MCL-Code Interpreter From The Terminal

This function removes the MCL-Code Interpreter from the terminal's NVM. This operation must be done with the terminal connected to the host computer and MCL-Loader running. If there is no connection, the removal operation fails.

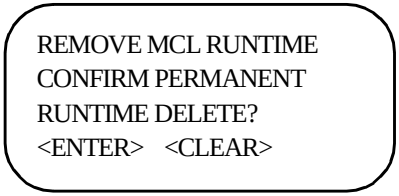


Figure 2-15. Remove MCL Runtime Screen 1

To abort the operation, press the <CLEAR> key.

When the <ENTER> key is pressed, the following message displays. On the host computer, enter the terminal serial number in the *Tools* tab of the MCL-Loader program.

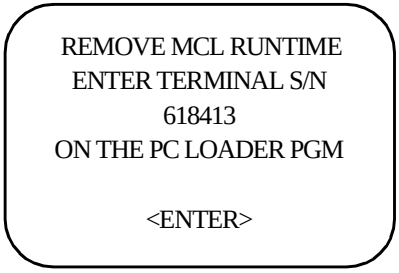


Figure 2-16. Remove MCL Runtime Screen 2

Press <ENTER> key on the terminal keyboard, the following screen appears:

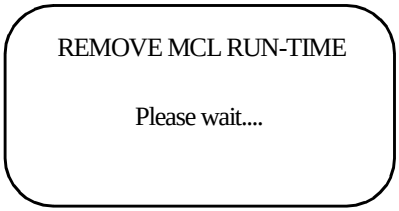


Figure 2-17. Remove MCL Runtime Screen 3

Click the DISABLE button of the MCL-Loader program.

Working with the Terminal

To be able to use the terminal, you must write a MCL-Code program which must be loaded into the terminal and executed. The steps necessary to use the terminal are:

- Writing your application
- Transferring your program into your terminal
- Running your MCL-Code program.

Writing An Application

Writing an MCL-Code program can be done with the MCL-Designer application. This product facilitates program writing and debugging while adding help, verification and program simulation.

Transferring Your Program Into the Terminal

When the program is written, it must be loaded into the terminal. This requires the following hardware configuration:

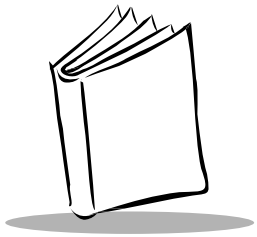
- MCL-Link, or MCL-Designer
- A Terminal
- A Cradle or PIM connected to your terminal
- An RS232 cable connecting the host computer to your Cradle or PIM.

When your terminal is placed in the cradle or connected to the PIM, start MCL-Link on the terminal. On the host computer, use MCL-Link or MCL-Designer to transfer the MCL-Code

program and data file (if exists) to your terminal. Refer to the *MCL-Link* or *MCL-Designer User's Guide* for more information.

Running the MCL-Code Program

When all the programs and files are transferred, return to the Boot Screen by pressing <CLEAR> twice on the terminal. After a 2 seconds time-out, the terminal starts automatically the Main MCL-Code program.To leave an MCL-Code program, press <Ctrl><X> during the program's execution.



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Tell Us What You Think...

We'd like to know what you think about this Manual. Please take a moment to fill out this questionaire and fax this form to: (516) 738-3318, or mail to:

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Holtsville, NY 11742-1300
Attn: Technical Publications Manager

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(please include revision level)

How familiar were you with this product before using this manual?

☐ Very familiar ☐ Slightly familiar ☐ Not at all familiar

Did this manual meet your needs? If not, please explain. _____

What topics need to be added to the index, if applicable? _____

What topics do you feel need to be better discussed? Please be specific. _____

What can we do to further improve our manuals? _____

Thank you for your input—We value your comments.

MCL-Loader Version 2 User's Guide

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